REMARKS

The foregoing amendment amends Claims 1 and 2 to clarify the claimed invention and adds Claim 11. Claims 1-11 are currently pending in this application, with Claims 7-10 being withdrawn, and Claim 1 being independent. For the reasons set forth below, Applicants believe that the rejections should be withdrawn and that the claims are in condition for allowance.

REJECTION OF CLAIMS 1 and 2 UNDER 35 U.S.C. 102(b)

The Examiner rejected Claims 1 and 2 under 35 U.S.C. 102(b) as being anticipated by Japanese Publication No. 11-333882 ('882). In order to anticipate a claim under 35 U.S.C. 102(b), a reference must disclose each and every element of a claim. As discussed below, this rejection is respectfully traversed.

The foregoing amendment to Claim 1 clarifies that the upper-die pin members hold the hollow component in the cavity; the upper-die urging means includes a first spring for urging a selected upper-die pin member downwardly and a second spring for urging the selected upper-die pin member upwardly, where an urging force of the first spring is larger than that of the second spring; the lower-die pin members hold the hollow component in the cavity in cooperation with the upper-die pin members to form a gap between the hollow component and the lower-die; and the lower-die urging means includes a third spring for urging a selected lower-die pin member upwardly and a fourth spring for urging the selected lower-die pin member downwardly, where an urging force of the third spring is larger than that of the fourth spring.

With the configuration recited by Claim 1 it is possible to allow molten resin to go around a primary molded piece (i.e., hollow component), including the underside of the primary molded piece, thereby creating an insert molding using the primary molded piece. Before molding, the primary molded piece is mounted on the lower-die pin members and the piece is positioned apart from the bottom of the lower die by the lower-die pin members. If

molten resin is injected into the cavity in the molding die while closing the molding die, i.e., by making the upper die approach the lower die, then the injected molten resin goes around the underside of the primary molded piece. [0008]. The configuration required by Claim 1 makes it possible to inject a predetermined amount of molten resin before completely closing the molding die, which avoids the deflection and collapse of the primary molded piece typically caused by injection pressure. In addition, it is possible to prevent molding defects, for example, "short shot" where the molten resin is solidified disadvantageously before it has permeated the whole cavity in the molding die. [0008 and 0018].

In Claim 1 the hollow component is flexibly supported by the first, second, third and fourth springs through the upper-die pin members and the lower-die pin members to absorb the pressure applied to the hollow component and thus preventing the hollow component from breaking. Therefore, the insert molding die for a hollow component as recited by Claim 1, overcomes the problem where there is a difference in the pressure between the upper side and the underside of the hollow component such that the hollow component is partially pressed and deformed, and potentially broken due to the deformation.

In contrast, '882 does not disclose a mold that is configured for an insert molding of a hollow component. [Abstract and Figs. 1-8]. '882 shows a mold for resin sealing of a semiconductor device. The '882 mold includes gate blocks that are able to move in the direction between the molds, and biasing means for biasing the gate blocks to protrude from the end surfaces of the cavity blocks. The gate blocks (50A, 50B) of '882 are located on the gate through which molten resin flows into a cavity formed between the movable mold (30A) and fixed mold (30B). [Fig. 7A]. Therefore, it is impossible for the gate blocks to hold a hollow component in a cavity formed between the movable mold and fixed mold. As illustrated by Figure 7A of '882, it is clear that the gate blocks are completely different from the upper-die and lower-die pin members of Claim 1.

Moreover, because the gate blocks can not hold a hollow component in the cavity, it is impossible to form a gap between a hollow component and the fixed mold. Thus, injected

molten resin could not go around the under side of a hollow component. It is evident that the '882 mold could not achieve the effects of the insert molding die for a hollow component as recited by Claim 1.

A comparison of Figures 7A of '882 to Figure 2 of the present invention clearly illustrates that '882 does not disclose or even suggest the upper-die and lower-die pin members or the upper-die and lower-die urging means as required by Claim 1. Claim 1 requires that the upper-die urging means includes a first downwardly urging spring and a second upwardly urging spring, where the urging force of the first spring is greater than the urging force of the second spring. The figures of '882 illustrate only a single spring or bias means (114) associated with the gate blocks (112). Accordingly, Claim 1 is not anticipated by '882.

Claim 2 depends directly from independent Claim 1. Accordingly, for at least the same reasons discussed above, Claim 2 is patentable over '882.

REJECTION OF CLAIMS 3-6 UNDER 35 U.S.C. 103(a)

The Examiner rejected Claims 3-6 are under 35 U.S.C. 103(a) as being unpatentable over '882. To establish a prima facie case of obviousness, the Examiner must: (1) identify the reason why a person of ordinary skill in the art would have combined the teachings of the references; and (2) show that the references teach or suggest all of the claimed limitations. As discussed below, this rejection is respectfully traversed.

Claims 3-6 depend directly or indirectly from independent Claim 1. Accordingly, for at least the same reasons discussed above, Claims 3-6 are patentable over '882.

NEW CLAIM 11

New Claim 11 has been added and is supported by the specification (see e.g., Fig. 2 and [0046] of the specification). Claim 11 further defines that the selected lower-die pin member includes a locate tip and depends from Claim 1. No new matter has been added.

Accordingly, dependent Claim 11 is patentable over '882 for at least the same reasons as independent Claim 1.

CONCLUSION

This application should now be in condition for allowance, and the Applicants solicits a notice to that effect. If there are any issues that can be addressed via telephone, the Examiner is asked to contact the undersigned at 404.685.6799. No fees are believed due, however, the Commissioner is authorized to charge any additional fees that may be due or credit any overpayment to Deposit Account No. 11-0855.

Respectfully submitted,

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